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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,007	10/23/2003	Clois E. Powell	5628-18900	8509

35690 7590 03/29/2005

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EXAMINER
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RONESI, VICKEY M

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/692,007	<b>Applicant(s)</b> POWELL, CLOIS E.	
	<b>Examiner</b> Vickey Ronesi	<b>Art Unit</b> 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/7/05</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02. Per the "Notice of Information Application" mailed 4/6/2004, a new oath or declaration is required which identifies the citizenship of each inventor.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-23 and 43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 causes confusion due to the use of the term "a rubber polymer" in two distinct contexts. The first "a rubber polymer" on line 1 is used to describe a mixture or compound. The second "a rubber polymer" on line 4 is used to describe a rubber alone. This causes confusion throughout the claims dependent on claim 1 since when the term "the rubber polymer" is recited, it is not clear to which "a rubber polymer" the claim is referring. For example, claim 23 recite "the rubber polymer" which appears to refer to a rubber polymer alone but it is uncertain.

Claims 21 and 22 recite the limitation "the rubber compound" in line 1 of each claim. There is insufficient antecedent basis for this limitation in the claim.

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Claim 43 recites the limitation "the organoclay-nitrile composition" in line 4 of the claim.

There is insufficient antecedent basis for this limitation in the claim.

Claims 2-20 and 23 are rejected for being dependent on a rejected claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-13, 15-34, and 36-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Weber et al (US 4,431,755).

Weber et al discloses a rubber composition comprising a rubber (col. 4, lines 33-41)—in particular nitrile rubber (col. 4, line 36); curing agents such as sulfur and peroxide systems (col. 4, lines 44-48); 5-200 pphr Agent G (col. 2, lines 40-41) which is a phyllosilicate (col. 4, line 49 to col. 5, line 48)—in particular montmorillonite, beidellite, nontronite, hectorite, saponite, stevensite, sauconite (col. 5, lines 32-33); and a quaternary ammonium salt (col. 7, line 24 to col. 10, line 10), wherein the composition is mixed at temperatures less than 200°C (col. 10, line 48 to col. 11, line 30) by any conventional compounding method which includes mixing the clay and quaternary ammonium salt at the same or different time to the rubber or form an adduct (i.e., organoclay) of the clay with the quaternary ammonium salt (i.e., organoclay) prior to mixing with the rubber to possibly improve uniformity of dispersion (col. 10, lines 31-47) and subsequently cured with the aid of activators stearic acid and zinc oxide (col. 10, lines 54-56)

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and a suitable accelerators (col. 11, lines 4-8) such as exemplified mercaptobenzothiazole disulfide (col. 12, line 8). It will be noted that Weber et al does not disclose the use of carbon black or silica.

With respect to claims 21 and 22, it is the examiner's position that since the composition disclosed by Weber et al anticipates the presently claimed composition, it is therefore inherent that the rubber composition of Weber et al exhibit the presently claimed mechanical properties since such properties are evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In light of the above, it is clear that Weber et al anticipates the presently cited claims.

4. Claims 14 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Weber et al (US 4,431,755) in view of evidence given by Nahmias et al (US 5,804,636).

The discussion with respect to Weber et al in paragraph 3 above is incorporated here by reference.

Weber et al does not explicitly disclose the use of zinc stearate as the activator in its composition, nonetheless, it is the examiner's position that it is inherent that the activators used, i.e., zinc oxide and stearic acid (col. 10, lines 54-56), inherently react to form zinc stearate which is then in use as the activator.

Evidence to support the examiner's position is found in Nahmias et al which teaches that known vulcanization activators include zinc stearate which is directly formed in a rubber composition upon addition of zinc oxide and stearic acid (col. 7, lines 11-13).

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In light of the above, it is clear that Weber et al in view of evidence given by Nahmias et al anticipates the presently cited claims.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Larson (US 6,858,665) discloses an elastomer composition with exfoliated clay prepared by mixing clay with rubber before treatment with quaternary ammonium salt.

- Kresge et al (US 5,576,372) discloses tire innerliners and innertubes which are prepared by mixing an onium-treated clay with rubber.

### ***Correspondence***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/21/2005

vr



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